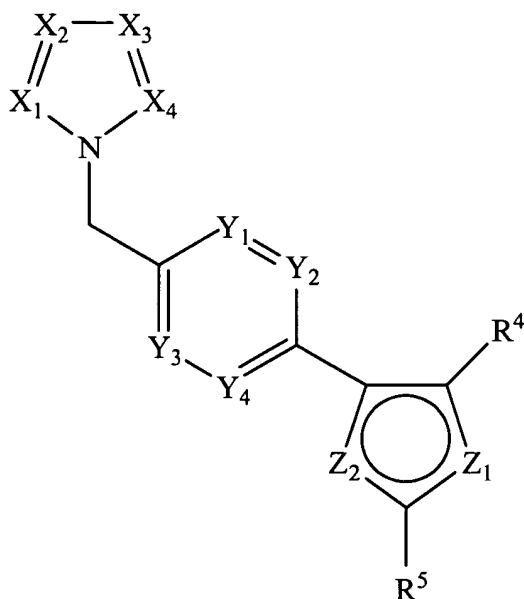


CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application.

1. (Original) A compound of formula I,



wherein

one of X₁ and X₂ represents -N- and the other represents -C(R¹)-;

X₃ represents -N- or -C(R²)-;

X₄ represents -N- or -C(R³)-;

R¹, R² and R³ independently represent H, C₁₋₆ alkyl, C₁₋₆ alkoxy,

C₁₋₆ alkoxy-C₁₋₆-alkyl or halo;

provided that, when X¹ represents -C(R¹)-, X₃ represents -C(R²)- and X₄ represents -C(R³)-, then R¹ represents H;

Y₁, Y₂, Y₃, and Y₄ independently represent -CH- or -CF-;

Z₁ represents -CH-, -O-, -S-, -N- or -CH=CH-;

Z₂ represents -CH-, -O-, -S- or -N-;

provided that:

- (a) Z_1 and Z_2 are not the same;
- (b) when Z_1 represents $-\text{CH}=\text{CH}-$, then Z_2 may only represent $-\text{CH}-$ or $-\text{N}-$; and
- (c) other than in the specific case in which Z_1 represents $-\text{CH}=\text{CH}-$, and Z_2 represents $-\text{CH}-$, when one Z_1 and Z_2 represents $-\text{CH}-$, then the other represents $-\text{O}-$ or $-\text{S}-$;

R^4 represents $-\text{S}(\text{O})_2\text{N}(\text{H})\text{C}(\text{O})\text{R}^6$, $-\text{S}(\text{O})_2\text{N}(\text{H})\text{S}(\text{O})_2\text{R}^6$, $-\text{C}(\text{O})\text{N}(\text{H})\text{S}(\text{O})_2\text{R}^6$,

or, when Z_1 represents $-\text{CH}=\text{CH}-$, R^4 may represent

$-\text{N}(\text{H})\text{S}(\text{O})_2\text{N}(\text{H})\text{C}(\text{O})\text{R}^7$ or $-\text{N}(\text{H})\text{C}(\text{O})\text{N}(\text{H})\text{S}(\text{O})_2\text{R}^7$;

R^5 represents C_{1-6} alkyl, C_{1-6} alkoxy, C_{1-6} alkoxy- C_{1-6} -alkyl or di- C_{1-3} -alkylamino- C_{1-4} -alkyl;

R^6 represents C_{1-6} alkyl, C_{1-6} alkoxy, C_{1-6} alkoxy- C_{1-6} -alkyl,

C_{1-3} alkoxy- C_{1-6} -alkoxy, C_{1-6} alkylamino or di- C_{1-6} alkylamino; and

R^7 represents C_{1-6} alkyl,

or a pharmaceutically-acceptable salt thereof.

2. (Withdrawn) A compound as claimed in claim 1 wherein, when X_1 represents $-\text{C}(\text{R}^1)-$, then X_3 represents $-\text{C}(\text{R}^2)-$ and X_4 represents $-\text{N}-$.

3. (Withdrawn) A compound as claimed in claim 2 wherein R^1 represents H.

4. (Withdrawn) A compound as claimed in claim 1 wherein, when X_1 represents $-\text{C}(\text{R}^1)-$, then X_3 and X_4 both represent N.

5. (Original) A compound as claimed in claim 1 wherein, when X_1 represents $-\text{C}(\text{R}^1)-$, then X_3 represents $-\text{C}(\text{R}^2)-$ and X_4 represents $-\text{C}(\text{R}^3)-$.

6. (Withdrawn) A compound as claimed in claim 1, wherein, when X_1 represents $-\text{N}-$, then X_3 represents $-\text{N}-$.

7. (Withdrawn) A compound as claimed in claim 6 wherein, when X.sub.4 represents --C(R³)--, then R³ represents H.

8. (Withdrawn) A compound as claimed in claim 1, wherein, when X₁ represents --N--, then X₃ represents --C(R²) and X₄ represents --C(R³)--.

9. (Presently amended) A compound as claimed in claim 1, wherein R¹ represents H, C₁₋₃ alkyl or fluoro CF₃.

10. (Original) A compound as claimed in claim 9, wherein R¹ represent H or ethyl.

11. (Original) A compound as claimed in claim 1 wherein R² represents C₁₋₃ alkyl, halo or H.

12. (Original) A compound as claimed in claim 11 wherein R² represents H or methyl.

13. (Original) A compound as claimed in claim 11 wherein R² represents H.

14. (Original) A compound as claimed in claim 1 wherein R³ represents C₁₋₃ alkyl, halo or H.

15. (Original) A compound as claimed in claim 14 wherein R³ represents H.

16. (Original) A compound as claimed in claim 1 wherein Y₁, Y₂, Y₃ and Y₄ all represent -CH-.

17. (Original) A compound as claimed in claim 1 wherein Z₁ represents -S- or -CH=CH-.

18. (Original) A compound as claimed in claim 17 wherein Z₁ represents -S-.

19. (Original) A compound as claimed in claim 1 wherein Z₂ represents -CH-.

20. (Original) A compound as claimed in claim 1 wherein R⁴ represents -S(O)₂N(H)C(O)R⁶.

21. (Original) A compound as claimed in claim 1 wherein R⁵ represents *n*-butyl or *iso*-butyl.

22. (Original) A compound as claimed in claim 21 wherein R⁵ represents *iso*-butyl.

23. (Presently Amended) A compound as claimed in claim 1 wherein, when R⁴ represents -S(O)₂N(H)C(O)R⁶, -S(O)₂N(H)S(O)₂R⁶ or -C(O)N(H)S(O)₂R⁶, then R⁶ represents *n*-butoxymethyl, *iso*-butoxy or *n*-butoxy.

24. (Original) A compound as claimed in claim 23 wherein R⁶ represents *n*-butoxy.

25. (Original) A compound as claimed in claim 1 wherein, when X₁, X₃ and X₄ all represent -CH-, Y₁, Y₂, Y₃ and Y₄ all represent -CH-, Z₁ represents -S- or -CH=CH-, Z₂ represents -CH- and R⁵ represents *n*-butyl or *iso*-butyl, then R⁴ represents -S(O)₂N(H)C(O)R⁶, in which R⁶ represents -O-*n*-butyl, -O-*iso*-propyl, -O-*iso*-butyl or -CH₂-O-*n*-butyl.

26. (Presently amended) A compound as claimed in claim 1, which is:
N-butyloxycarbonyl-3-(4-imidazol-1-ylmethylphenyl)-5-*iso*-butylthio-phenene-2-sulfonamide;
N-*iso*-butyloxycarbonyl-3-(4-imidazol-1-ylmethylphenyl)-5-*iso*-butyl-thiophene-2-sulfonamide;
N-*iso*-propyloxycarbonyl-3-(4-imidazol-1-ylmethylphenyl)-5-*iso*-butyl-thiophene-2-sulfonamide;

N-(butoxyacetyl)-3-(4-imidazol-1-ylmethylphenyl)-5-*iso*-butylthiophene-2-sulfonamide;
~~*N*-butyloxycarbonyl-3-(4-imidazol-1-ylmethylphenyl)-5-butylthiophene-2-sulfonamide;~~
N-butyloxycarbonyl-3-(4-imidazol-1-ylmethylphenyl)-5-butylthiophene-2-sulfonamide;
~~*N*-butyloxycarbonyl-2-(4-imidazol-1-ylmethylphenyl)-4-*iso*-butylbenzene-sulfonamide;~~
N-butyloxycarbonyl-2-(4-imidazol-1-ylmethylphenyl)-4-*iso*-butylbenzenesulfonamide;
N-butyloxycarbonyl-5-*iso*-butyl-3-(4-tetrazol-2-ylmethylphenyl)thiophene-2-sulfonamide;
N-butyloxycarbonyl-5-*iso*-butyl-3-(4-tetrazol-1-ylmethylphenyl)thiophene-2-sulfonamide;
N-butyloxycarbonyl-3-(4-[1,2,4]triazol-1-ylmethylphenyl)-5-*iso*-butyl-thiophene-2-sulfonamide;
N-(butylamino)carbonyl-3-(4-imidazol-1-ylmethylphenyl)-5-*iso*-butyl-thiophene-2-sulfonamide;
N-butylsulfonyl-3-(4-imidazol-1-ylmethylphenyl)-5-*iso*-butylthiophene-2-sulfonamide;
N-butylsulfonyl-3-(4-imidazol-1-ylmethylphenyl)-5-*iso*-butylthiophene-2-carboxamide;
~~*N*-butyloxycarbonyl-4-butyl-2-(4-imidazol-1-ylmethylphenyl)benzene-sulfonamide;~~
N-butyloxycarbonyl-4-butyl-2-(4-imidazol-1-ylmethylphenyl)benzenesulfonamide;
N-(2-methoxyethyloxy)carbonyl-3-(4-indazol-1-ylmethylphenyl)-5-*iso*-butylthiophene-2-sulfonamide;
N-ethyloxycarbonyl-3-(4-imidazol-1-ylmethylphenyl)-5-*iso*-butylthiophene-2-sulfonamide;
N-*tert*-butyloxycarbonyl-3-(4-imidazol-1-ylmethylphenyl)-5-*iso*-butyl-thiophene-2-sulfonamide;
N-butyloxycarbonyl-3-[4-(4-methylimidazol-1-ylmethyl)phenyl]-5-*iso*-butylthiophene-2-sulfonamide;
N-butyloxycarbonyl-3-(4-pyrazol-1-ylmethylphenyl)-5-*iso*-butylthiophene-2-sulfonamide;
N-butyloxycarbonyl-3-[4-(3-trifluoromethylpyrazol-1-ylmethyl)-phenyl]-5-*iso*-butylthiophene-2-sulfonamide;
N-(*N*-butyl-*N*-methylanino)carbonyl-3-(4-imidazol-1-ylmethylphenyl)-5-*iso*-butylthiophene-2-sulfonamide; or
N-butyloxycarbonyl-3-(4-imidazol-1-ylmethylphenyl)-5-(2-methoxyethyl)-thiophene-2-sulfonamide.

27. (Original) A pharmaceutical formulation including a compound as defined in claim 1, or a pharmaceutically acceptable salt thereof, in admixture with a pharmaceutically acceptable adjuvant, diluent or carrier.

28-31 (Cancelled)

32. (Original) A pharmaceutical formulation including a compound as defined in claim 1, or a pharmaceutically acceptable salt thereof, and an AT1 receptor antagonist, in admixture with a pharmaceutically-acceptable adjuvant, diluent or carrier.

33. (Original) A kit of parts comprising components:

- (a) a pharmaceutical formulation including a compound as defined in Claim 1, or a pharmaceutically acceptable salt thereof, in admixture with a pharmaceutically-acceptable adjuvant, diluent or carrier; and
- (b) a pharmaceutical formulation including an AT1 receptor antagonist, in admixture with a pharmaceutically-acceptable adjuvant, diluent or carrier, which components (a) and (b) are each provided in a form that is suitable for administration in conjunction with the other.

34. (Original) A pharmaceutical formulation including a compound as defined in claim 1, or a pharmaceutically acceptable salt thereof, and an angiotensin converting enzyme inhibitor, in admixture with a pharmaceutically-acceptable adjuvant, diluent or carrier.

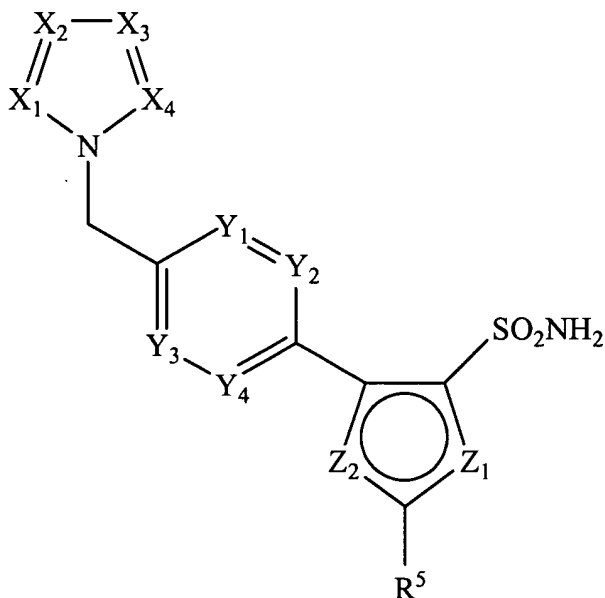
35. (Original) A kit of parts comprising components:

- (a) a pharmaceutical formulation including a compound as defined in claim 1, or a pharmaceutically acceptable salt thereof, in admixture is with a pharmaceutically-acceptable adjuvant, diluent or carrier; and
- (b) a pharmaceutical formulation including an angiotensin converting enzyme inhibitor, in admixture with a pharmaceutically-acceptable adjuvant, diluent or carrier, which

components (a) and (b) are each provided in a form that is suitable for administration in conjunction with the other.

36. (Withdrawn) A process for the preparation of a compound as defined in claim 1, which comprises:

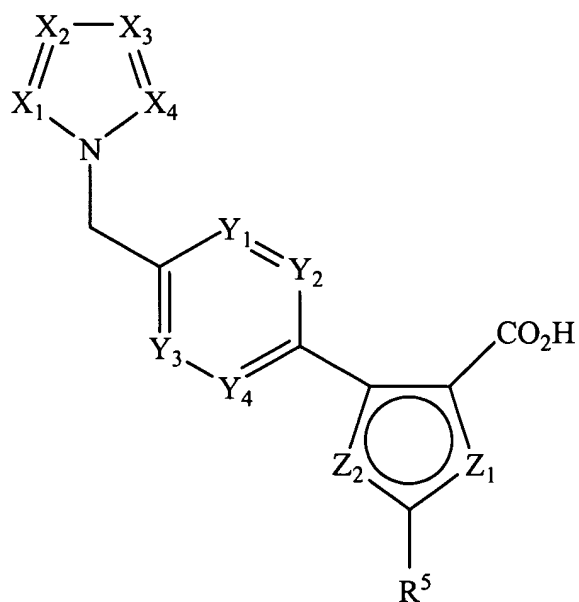
(i) for compounds of formula I in which R^4 represents $--S(O)_2N(H)C(O)R^6$ or $--S(O)_2N(H)S(O)_2R^6$, and R^6 is as defined in claim 1, reaction of a compound of formula II,



wherein X_1 , X_2 , X_3 , X_4 , Y_1 , Y_2 , Y_3 , Y_4 , Z_1 , Z_2 and R^5 are as defined in claim 1 with a compound of formula III, R^6GL^1 III wherein G represents $C(O)$ or $S(O)_2$ (as appropriate), L^1 represents a suitable leaving group and R^6 is as defined in claim 1;

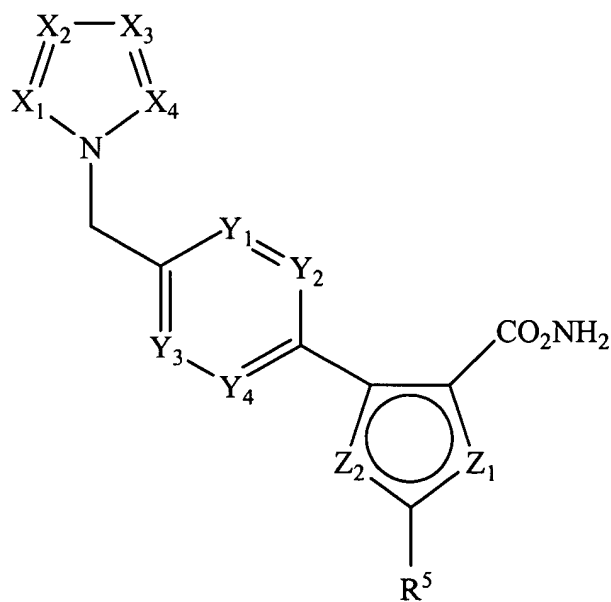
(ii) for compounds of formula I in which R^4 represents $--S(O)_2N(H)C(O)R^6$ and R^6 represents C_{1-6} alkoxy- C_{1-6} -alkyl, coupling of a compound of formula II as defined above with a compound of formula IV, $R^{6a}CO_2H$ IV wherein R^{6a} represents C_{1-6} alkoxy- C_{1-6} -alkyl;

(iii) for compounds of formula I in which R^4 represents $--C(O)N(H)S(O)_2R^6$ and R^6 is as defined in claim 1, coupling of a compound of formula V,



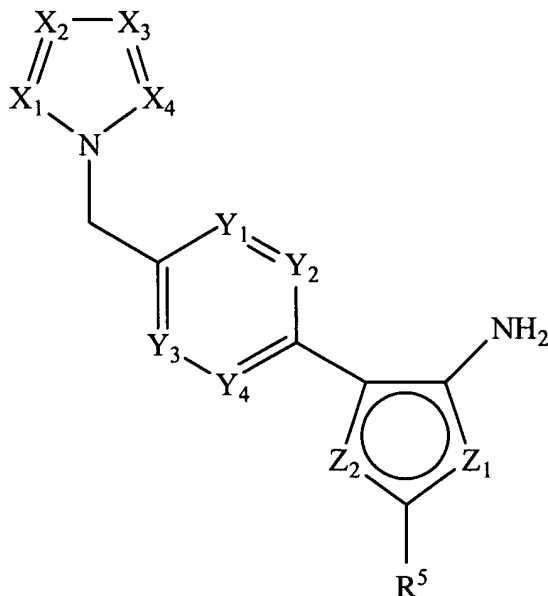
wherein X_1 , X_2 , X_3 , X_4 , Y_1 , Y_2 , Y_3 , Y_4 , Z_1 , Z_2 and R^5 are as defined in claim 1, with a compound of formula VI, $R^6S(O)_2NH_2$ VI wherein R^6 is as defined in claim 1;

(iv) for compounds of formula I in which R^4 represents $--C(O)N(H)S(O)_2R^6$ and R^6 is as defined in claim 1, coupling of a compound of formula VII,



wherein X_1 , X_2 , X_3 , X_4 , Y_1 , Y_2 , Y_3 , Y_4 , Z_1 , Z_2 and R^5 are as defined in claim 1, with a compound of formula VIII, $R^6S(O)_2Cl$ VIII wherein R^6 is as defined in claim 1;

(v) for compounds of formula 1 in which R^4 represents $--N(H)S(O)_2N(H)C(O)R^7$ and R^7 is as defined in claim 1, reaction of a compound of formula IX,



wherein X_1 , X_2 , X_3 , X_4 , Y_1 , Y_2 , Y_3 , Y_4 , Z_1 , Z_2 and R^5 are as defined in claim 1, with a compound of formula X, $R^7C(O)N(H)S(O)_2Cl$ X wherein R^7 is as defined in claim 1;

(vi) for compounds of formula I in which R^4 represents $--N(H)C(O)N(H)S(O)_2R^7$ and R^7 is as defined in claim 1, reaction of a compound of formula IX as defined above with a compound of formula XI, $R^7S(O)_2N(H)C(O)OR^x$ XI wherein R^x represents C_{1-2} alkyl and R^7 is as defined in claim 1; (vii) for compounds of formula I in which R^4 represents $--N(H)C(O)N(H)S(O)_2R^7$ and R^7 is as defined in claim 1, reaction of a compound of formula IX as defined above with a compound of formula XII, $R^7S(O)_2NCO$ XII wherein R^7 is as defined in claim 1; (viii) for compounds of formula I in which R^4 represents $--S(O)_2N(H)C(O)R^6$ and R^6 represents C_{1-6} alkylamino, reaction of a compound of formula II as defined above with a compound of formula XIII, $R^{6b}NCO$ XIII wherein R^{6b} represents C_{1-6} alkyl; or (ix) for compounds of formula I in which R^4 represents $--S(O)_2N(H)C(O)R^6$ and R^6 represents di- C_{1-6} alkylamino, reaction of a corresponding compound of formula I in which R^4 represents $--S(O)_2N(H)C(O)R^6$ and R^6 represents C_{1-6} alkoxy with a compound formula XIV, $R^{6c}N(H)R^{6d}$ XIV wherein R^{6c} and R^{6d} independently represent C_{1-6} alkyl.

37. (Withdrawn) A compound of formula II as defined in claim 36 or a protected derivative thereof.

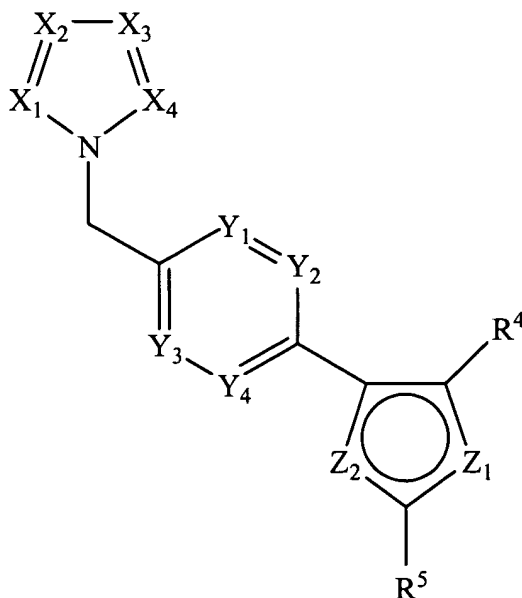
38. (Withdrawn) A compound of formula II as claimed in claim 36, or a protected derivative thereof, wherein X_1 , X_2 , X_3 , and X_4 all represent $--CH--$, Y_1 , Y_2 , Y_3 , and Y_4 all represent $--CH--$, Z_1 represents $--S--$ or $--CH=CH--$, Z_2 represents $--CH--$ and R^5 represents n-butyl or iso-butyl.

39. (Withdrawn) A compound of formula V as defined in claim 36 or a protected derivative thereof.

40. (Withdrawn) A compound of formula VII as defined in claim 36 or a protected derivative thereof.

41. (Withdrawn) A compound of formula IX as defined in claim 36 or a protected derivative thereof.

42. (New) A compound of formula I,



wherein

X_1 represents $-CH-$;

X_2 represents $-N-$;

X_3 represents $-C(R^2)-$;

X_4 represents $-C(R^3)-$;

R² and R³ independently represent H, C₁₋₆ alkyl, C₁₋₆ alkoxy,

C₁₋₆ alkoxy-C₁₋₆-alkyl or halo;

Y₁, Y₂, Y₃, and Y₄ independently represent -CH- or -CF-;

Z₁ represents -S-;

Z₂ represents -CH-, -O-, -S- or -N-;

provided that:

- (a) Z₁ and Z₂ are not the same;
- (b) when Z₁ represents -CH=CH-, then Z₂ may only represent -CH- or -N-; and
- (c) other than in the specific case in which Z₁ represents -CH=CH-, and Z₂ represents -CH-, when one Z₁ and Z₂ represents -CH-, then the other represents -O- or -S-;

R⁴ represents -S(O)₂N(H)C(O)R⁶, -S(O)₂N(H)S(O)₂R⁶, -C(O)N(H)S(O)₂R⁶,

or, when Z₁ represents -CH=CH-, R⁴ may represent

-N(H)S(O)₂N(H)C(O)R⁷ or -N(H)C(O)N(H)S(O)₂R⁷;

R⁵ represents C₁₋₆ alkyl, C₁₋₆ alkoxy, C₁₋₆ alkoxy-C₁₋₆-alkyl or di-C₁₋₃-alkylamino-C₁₋₄-alkyl;

R⁶ represents C₁₋₆ alkyl, C₁₋₆ alkoxy, C₁₋₆ alkoxy-C₁₋₆-alkyl,

C₁₋₃ alkoxy-C₁₋₆-alkoxy, C₁₋₆ alkylamino or di-C₁₋₆ alkylamino; and

R⁷ represents C₁₋₆ alkyl,

or a pharmaceutically-acceptable salt thereof.